BIOPROCESSING CONGRESS ASIA

19 - 20 AUGUST 2025 SINGAPORE

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BioPharma Asia
The Journal for Asia's Pharmaceutical and Biopharmaceutical Industry

BioSpectrum ASIA EDITION
the business of Bio & Health Sciences

ORGANISED BY

Global Engage

Global Engage is excited to announce the **Bioprocessing Congress Asia 2025**, taking place on **August 19-20** in **Singapore**.

Building on the momentum of our expanding presence in Asia, this premier event will serve as a vital platform for industry leaders, scientists, and solution providers to explore cutting-edge strategies and innovative technologies shaping the future of biotherapeutic and advanced modality manufacturing in the region.

Bioprocessing remains a cornerstone of the pharmaceutical industry, with biologics, biosimilars, and cell and gene therapies playing an increasingly pivotal role in patient care. The sector's rapid pace of innovation—from intensified upstream processes to integrated continuous purification and digital manufacturing—reflects the global response to healthcare challenges and the rising demand for scalable, efficient production systems.

This year's agenda will cover key topics across upstream and downstream processing, automation, digital transformation, and the scalable manufacture of advanced therapies such as viral vectors and cell-based products. Attendees will also delve into critical areas like GMP compliance, Quality by Design (QbD), regulatory frameworks, and sustainable, future-proof biomanufacturing practices tailored to Asia's dynamic landscape.

This two-day summit uniquely combines specialized forums and interactive sessions that address the complexities of drug R&D in the 21st century. With a diverse roster of global speakers, hands-on workshops, and strategic networking opportunities, participants will gain actionable insights poised to accelerate innovation from bench to bedside.

Don't miss this opportunity to foster meaningful connections, exchange ideas, and explore potential partnerships within the vibrant bioprocessing community!

FOLLOW US ON SOCIAL MEDIA

OPENING NOTE

UPSTREAM PROCESSING & CELL LINE DEVELOPMENT

- Cell line engineering and selection
- Bioreactor design and intensification
- Media optimization strategies

DOWNSTREAM PROCESSING & PURIFICATION

- Filtration and chromatography advances
- Continuous purification systems
- Yield and impurity management

AUTOMATION, ANALYTICS & DIGITAL TRANSFORMATION

- Process Analytical Technology (PAT) and in-line monitoring
- AI, machine learning, and digital twins in biomanufacturing
- Automation for process control and predictive modelling

MANUFACTURING OF ADVANCED THERAPIES

- Cell and gene therapy production and scale-up
- Viral vector manufacturing and quality management
- Regulatory and facility considerations for advanced modalities

QUALITY, COMPLIANCE & REGULATORY STRATEGIES

- Quality by Design (QbD) and risk-based approaches
- GMP compliance across bioprocessing stages
- Global and regional regulatory alignment

SUSTAINABLE & FUTURE-PROOF BIOMANUFACTURING

- Sustainable practices and energy-efficient technologies
- Waste reduction and single-use systems
- Innovation pipelines and regional tech transfer in Asia

POSTER PRESENTATIONS

Poster presentation sessions will take place in breaks and alongside the other breakout sessions of the conference. Your presentation will be displayed in a dedicated area, with the other accepted posters from industry and academic presenters. Whether looking for funding, employment opportunities or simply wanting to share your work with a like-minded and focused group, these are an excellent way to join the heart of this congress. In order to present a poster at the forum you need to be registered as a delegate.

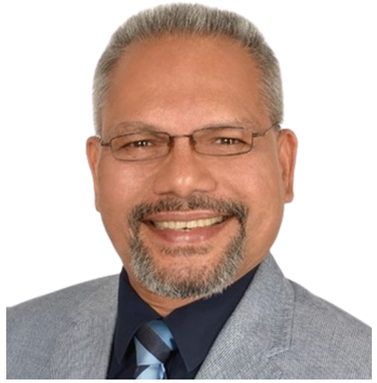
Please note that there is limited space available and poster space is assigned on a first come first served basis (subject to checks and successful registration). We will require the form to be submitted by 2nd May 2025. This is the formal deadline however space is another limiting factor so early application is recommended.

THEMES FOR 2025

Jack WONG
CEO
RNAscence, Singapore

Zach PANG PhD MBA CEng
Group Leader, Analytical Science & Technology (Bioprocess Data Integration),
Bioprocessing Technology Institute, Singapore

Gina JIANG
Managing Director**, The Hong Kong Institute of Biotechnology Limited, Hong Kong**



Dinesh KHOKAL
Global Director, GxP Surveillance & Quality External Affairs,
Beigene, Singapore

Ravi GANAPATHY Ph.D, PGDBA (Ops)
Senior Director - Vaccine Process Development,
International Vaccine Institute, South Korea

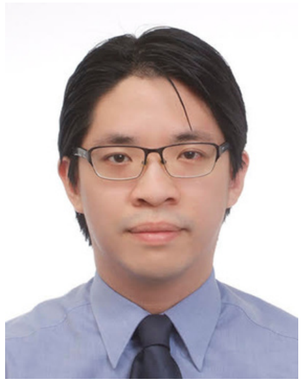
Indra RUDIANSYAH
Project Leader - mRNA and Viral Vector Vaccine Programme,
Bio Farma, Indonesia

Vinod BULUSU
Executive Director, Product Stewardship Lead, AstraZeneca, USA

Shireen GOH
Associate Professor – Biomedical & Healthcare,
Singapore University of Technology & Design, Singapore

Rajendar BURKI
Vice President Research & Development,
Biological E. Limited, India

Karthick MURUGAPPAN
Senior Scientist,
MSD, Singapore



Wei XIN
Senior Research Fellow,
National University of Singapore, Singapore

Show Pau LOKE
Professor Ir. Ts. Dr.,
Khalifa University, United Arab Emirates & University of Nottingham, Malaysia

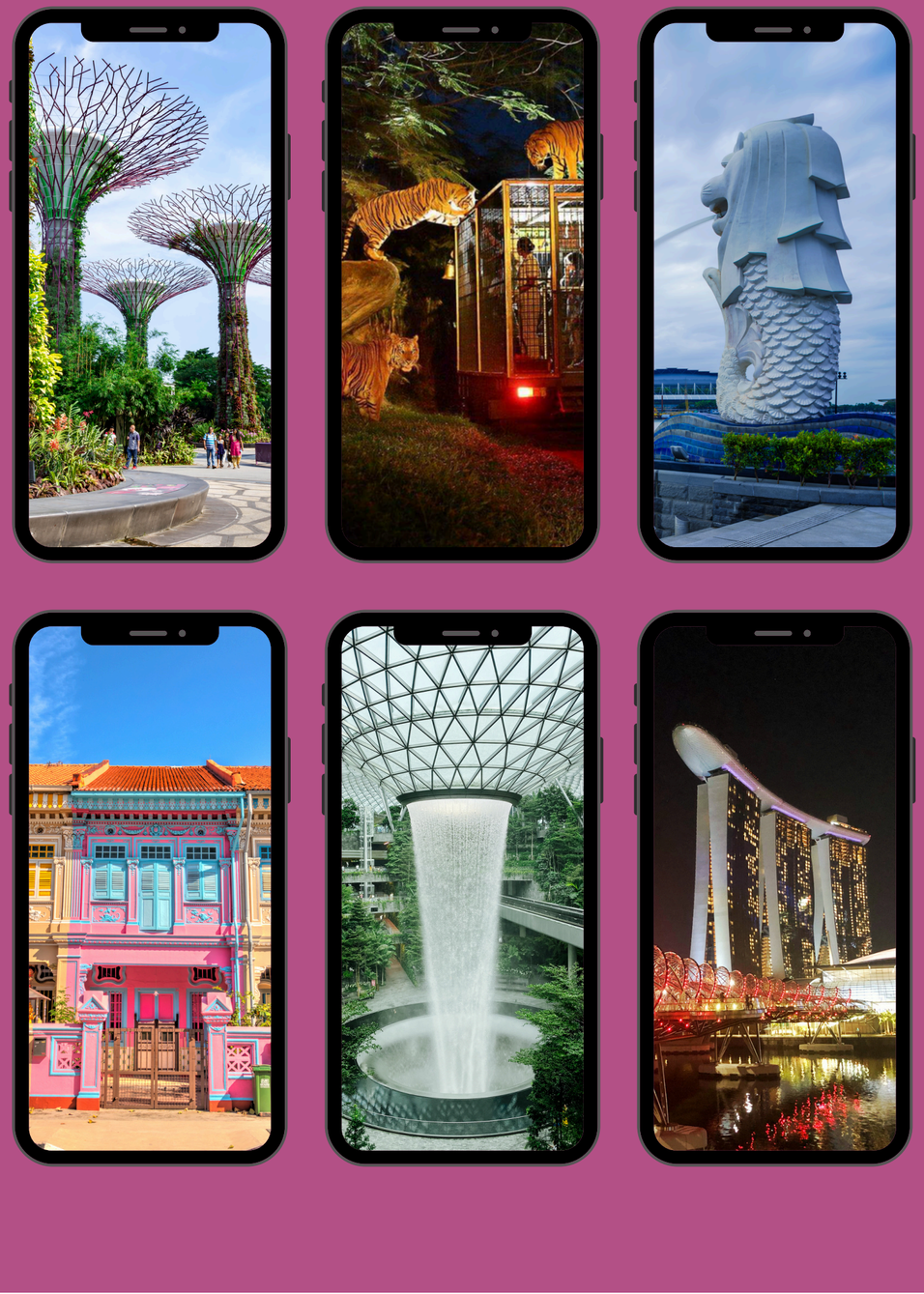
SPEAKERS

SINGAPORE

Singapore’s strategic location and thriving research ecosystem make it the ideal venue, fostering collaboration between academia, industry, and start-ups. With strong government support, progressive regulations, and world-class infrastructure, Singapore continues to be a hub for innovation in bioprocessing. Beyond its professionalism, the city boasts vibrant cultural experiences, stunning architecture, and lush green spaces that inspire creativity and collaboration. Singapore’s reputation for safety, cleanliness, and hospitality ensures a comfortable and enjoyable stay for all attendees.

Singapore offers an exciting blend of attractions to enrich your visit.

- Explore **Gardens by the Bay**, where futuristic Supertrees and lush indoor gardens create a spectacular urban oasis.
- Take in breathtaking views from the **Marina Bay Sands SkyPark**, an architectural icon overlooking the vibrant cityscape.
- For a fun-filled day, head to **Sentosa Island**, home to beautiful beaches and thrilling attractions like Universal Studios.
- Immerse yourself in culture at the **Chinatown Heritage Centre**, showcasing Singapore’s rich history.
- Finally, experience wildlife up close at the **Singapore Zoo and Night Safari**, a unique adventure that highlights the city’s commitment to nature conservation.



DAY 1 - 19th AUGUST 2025

08:00 **Registration & Refreshments**

08:50 **Welcome Remarks by Global Engage**
Chairpersons' Opening Remarks

09:00 **Zach PANG PhD MBA CEng,** Group Leader, Analytical Science & Technology (Bioprocess Data Integration)**, Bioprocessing Technology Institute, Singapore**

Computational Approach to Accelerate Culture Media Optimization for New Modalities
Culture media optimization plays a vital role in bioprocess development. Achieving an optimal formulation for the culture media is crucial as it enables maximum cell growth and subsequently yields the highest possible cell density. The current workflow involves experimental Design of Experiments (DOE) to determine the optimal culture media formulation. A paradigm shift is underway in the optimization of culture media, wherein a modelling approach can be employed to accelerate culture media optimization. In this talk, I will introduce a computational approach involving genome-scale metabolic modelling and model-guided DoE approach, and how this workflow can help the industry, particularly for new modalities, to accelerate culture media design and optimization.

09:25 **TECHNOLOGY PARTNER PRESENTATION**
Please contact Reuben Raj
reuben@global-engage.com for sponsorship opportunities

09:55 **PANEL DISCUSSION**
Navigating the APAC Regulatory Landscape: Paving the Way for Bioprocessing Excellence
As the APAC region emerges as a hub for bioprocessing innovation, navigating its diverse regulatory landscape is both a challenge and an opportunity. This panel will bring together regional experts and regulatory leaders to discuss how collaborative frameworks, digital tools, and harmonized standards can streamline product approvals and boost confidence in regulatory processes. Together, we'll explore how to build a more agile, transparent, and innovation-ready regulatory environment across Asia-Pacific.

- Drive collaborative efforts to streamline approvals across APAC markets
- Leverage technology and data science to enhance regulatory review
- Foster strong collaborations to improve regulatory consistency and drive innovation

Panelists:
Jack WONG, CEO**, RNAscence, Singapore**
Gina JIANG, Managing Director**, The Hong Kong Institute of Biotechnology Limited, Hong Kong**
Dinesh KHOKAL, Global Director, GxP Surveillance & Quality External Affairs, **Beigene, Singapore**

10:25 **Morning Refreshments/Poster Presentations/One-to-One Meetings**

DAY 1 - 19th AUGUST 2025

11:25 **KEYNOTE PRESENTATION**
Accelerating Bioprocessing Innovation: Driving Efficiency, Sustainability, and Commercial Success

Speaker: TBC

11:55 **Shireen GOH,** Associate Professor – Biomedical & Healthcare**, Singapore University of Technology & Design, Singapore**

Cleaner Perfusion Culture with Novel Filter that Reduces Host Cell Protein (HCP) Impurities for More Stable Formulation of Monoclonal Antibodies (mAbs)
Host cell proteins (HCPs) compromise monoclonal antibody (mAb) stability and yield. We introduce a novel, clog-free perfusion filter—based on high-density inertial microfluidics—that removes dead cells directly from bioreactors, significantly lowering HCP impurities. Designed for high cell densities (up to 10^8 cells/mL) and optimized through numerical modeling, this breakthrough technology has been described as disruptive by leading biopharma companies. Discover how this innovation enhances purification efficiency and enables more stable, scalable mAb production.

12:20 **Indra RUDIANSYAH,** Project Leader — mRNA and Viral Vector Vaccine Programme**, Bio Farma, Indonesia**

Integrated Technology for mRNA Vaccine Production
Abstract Pending

12:45 **TECHNOLOGY PARTNER PRESENTATION**
Please contact Reuben Raj
reuben@global-engage.com for sponsorship opportunities

13:15 **Lunch / Poster Presentations / One-to-One Meetings**

14:15 **Karthick MURUGAPPAN,** Senior Scientist**, MSD, Singapore**

From Complexity to Clarity: Multivariate Data Analysis for Smarter Process Monitoring
Traditional process monitoring typically relies on numerous single variable plots, a method that can be both labor-intensive and reactive, often relegating data analysis to post-manufacturing stages. This univariate approach obscures the intricate correlations between variables, making it difficult to spot trends. To enhance this process, we employ multivariate data analysis, which elegantly condenses numerous single variable plots into a select few multivariate visualizations, all while retaining critical information. By utilizing these insightful plots directly on the manufacturing shop floor, Operators can swiftly identify when trends deviate from usual limits and delve into the underlying variables with ease. Furthermore, customizable multivariate alarms can proactively notify Operators of any process deviations. This innovative multivariate monitoring system serves as an early warning mechanism, empowering Operators to detect and rectify anomalies before they escalate into significant issues. Ultimately, real-time process monitoring drives consistent performance, maximizes productivity, and mitigates the risk of costly rework or batch discards.

DAY 1 - 19th AUGUST 2025

14:40 **Dinesh KHOKAL,** Global Director, GxP Surveillance & Quality External Affairs**, Beigene, Singapore**

Topic & Abstract Pending

15:05 **TECHNOLOGY PARTNER PRESENTATION**
Please contact Reuben Raj
reuben@global-engage.com for sponsorship opportunities

15:35 **Afternoon Refreshment/ Poster Presentations / One-to-One Meetings**

16:35 **Jack WONG,** CEO**, RNAscence, Singapore**

Experience Sharing on How to Launch a Biotechnology Product in Asia and Navigating Regulatory Pathways
- What is a regulatory strategy & when should you start
- Setting up your regulatory strategy team
- Most importantly, how to process your registration and launch your product in a timely manner

17:00 **Dr. Gina JIANG,** Managing Director**, The Hong Kong Institute of Biotechnology Limited, Hong Kong**

Advanced Therapy Medicinal Product (ATMP) Manufacturing in APAC: Navigating Regulatory Pathways and Building Sustainable Ecosystems
Hong Kong is emerging as a strategic hub for ATMP and cell and gene therapy manufacturing in APAC. With its strong regulatory alignment and position within China's Greater Bay Area, the region offers immense potential for global partnerships. This session highlights the role of the Hong Kong Institute of Biotechnology (HKIB) and its PIC/S GMP-certified facility in advancing CAR-T cell therapies, expanding into mesenchymal stem cells (MSCs), and building a globally connected, sustainable ecosystem to enhance access and innovation in advanced therapies.

17:25 **Group Photo & End of Day 1**

DAY 2 - 20th AUGUST 2025

08:50 **Chairpersons' Opening Remarks**

09:00 **Invitation Out**

09:25 **TECHNOLOGY PARTNER PRESENTATION**
Please contact Reuben Raj
reuben@global-engage.com for sponsorship opportunities

09:55 **Invitation Out**

10:25 **Morning Refreshments/Poster Presentations/One-to-One Meetings**

11:25 **KEYNOTE PRESENTATION**
Vinod BULUSA, Executive Director, Product Stewardship Lead, **AstraZeneca, USA**

Biologics at the Core: Advancing AstraZeneca's 2030 Bold Ambition Through Innovation and Sustainability
Abstract Pending

11:55 **Rajendar BURKI PhD,** Vice President Research & Development**, Biological E. Limited, India**

Downstream Mastery: Achieving High-Purity Products with Efficient Purification
- Utilize multimodal and membrane chromatography to achieve high product purity with fewer purification steps, reducing processing time and resource consumption.
- Implement continuous filtration, chromatography, and purification steps to minimize process downtime, reduce labor costs, and enhance overall process efficiency.
- Tailor downstream processes to the unique properties of different biotherapeutics, ensuring high yield, purity, and stability while minimizing costs.

12:20 **Ravi GANAPATHY, Ph.D, PGDBA (Ops),** Senior Director - Vaccine Process Development**, International Vaccine Institute, South Korea**

Innovations in Chromatography for High-Efficiency Protein Purification
This session highlights strategies to enhance yield, purity, and cost-efficiency, tailored to meet the growing demand for biologics in Singapore's thriving biopharma industry and the broader Asia-Pacific region.

12:45 **TECHNOLOGY PARTNER PRESENTATION**
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Cell & Gene

13:15 **Lunch / Poster Presentations / One-to-One Meetings**

DAY 2 - 20th AUGUST 2025

14:15 **Show Pau LOKE,** Professor Ir. Ts. Dr.**, Khalifa University, United Arab Emirates & University of Nottingham, Malaysia**

Recent Progress in Microalgae Bioprocessing

In recent years, the Liquid Biphasic System (LBS) has become a proven tool used in separation and purification technology for circular bioeconomy in microalgae biorefinery. The application of the Internet of Things (IoT) in LBSs in clarification, partitioning, and partial purification of biomolecules and bioproducts has shown rapid development. This method can yield a high recovery yield and purity in a single step. The LBS shows characteristics of high selectivity and is easy to scale up. Therefore, LBS offers an attractive alternative that meets the requirements of the high demand in industry processes and is also beneficial in terms of economic and environmental protection. This presentation aims to share the recent literature works on the development of different types of LBSs and their applications in novel separations and purifications of biomaterials. Hopefully, this presentation will be able to build solid research collaborations among industry players and researchers

14:40 **EARLY CAREER RESEARCHER PRESENTATION**

Wei XIN, Senior Research Fellow**, National University of Singapore**

An Integrated Vaccine Design and Manufacturing Approach to Enhance Genetic Stability and GMP Readiness of Live Attenuated RNA Vaccines

Live attenuated RNA virus vaccines are often constrained by high mutation rates, leading to the risk of reversion to virulence. To overcome this, we developed an integrated vaccine design and production strategy spanning rational attenuation, reverse genetics engineering, and high-fidelity virus rescue. In our orthoflavivirus platform, vaccine seed stocks are recovered from plasmid DNA clones derived from single bacterial colonies to ensure template homogeneity. Viral RNA is transcribed using a mammalian promoter system in GMP-grade Vero cells, providing greater fidelity than conventional bacteriophage polymerases. Attenuation is achieved via a broad distribution of synonymous mutations across the genome, reducing reversion risk by avoiding reliance on a few critical loci. The resulting virus population is highly homogeneous: even after ten serial passages, next-generation sequencing detects no reversion mutations. This end-to-end approach supports the development of live RNA virus vaccines that are genetically stable and compatible with GMP-grade Vero cell production platforms.

15:05 **End of Day 2**

Speak to Us

We believe every connection is an opportunity to share ideas, solve challenges, and grow together—just like a great conference. Whether you have questions, want to discuss collaboration, or need support, we are here to listen and engage in meaningful dialogue with you.

Reach out to us anytime—we would love to start a conversation and explore how we can work together!

To Speak

Khamini Chelveraj

khamini@global-engage.com

To Exhibit

Reuben Raj

reuben@global-engage.com

To Attend and Other Enquiries

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